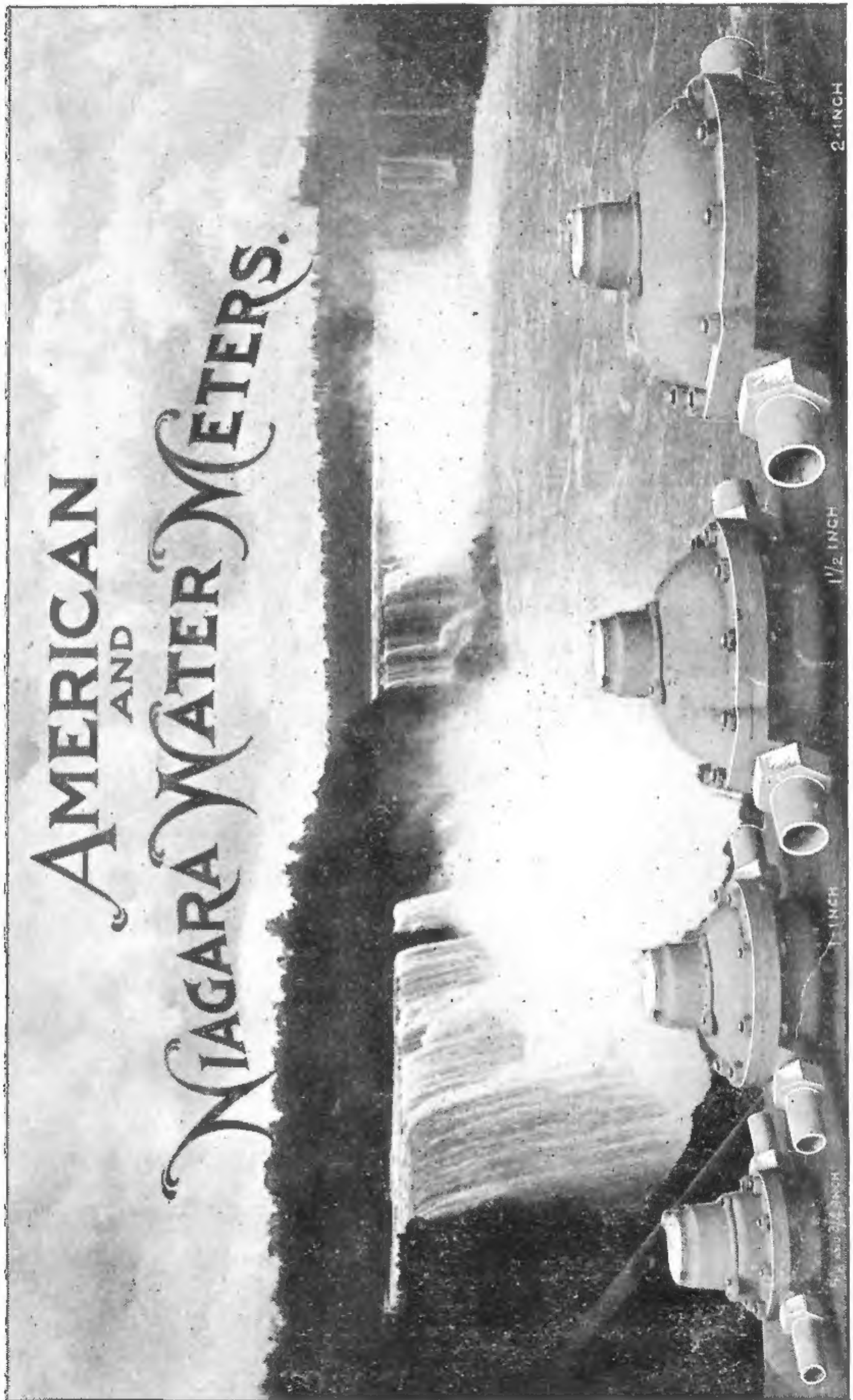


# 1902

## TENTH ANNUAL ILLUSTRATED CATALOGUE AND PRICE LIST

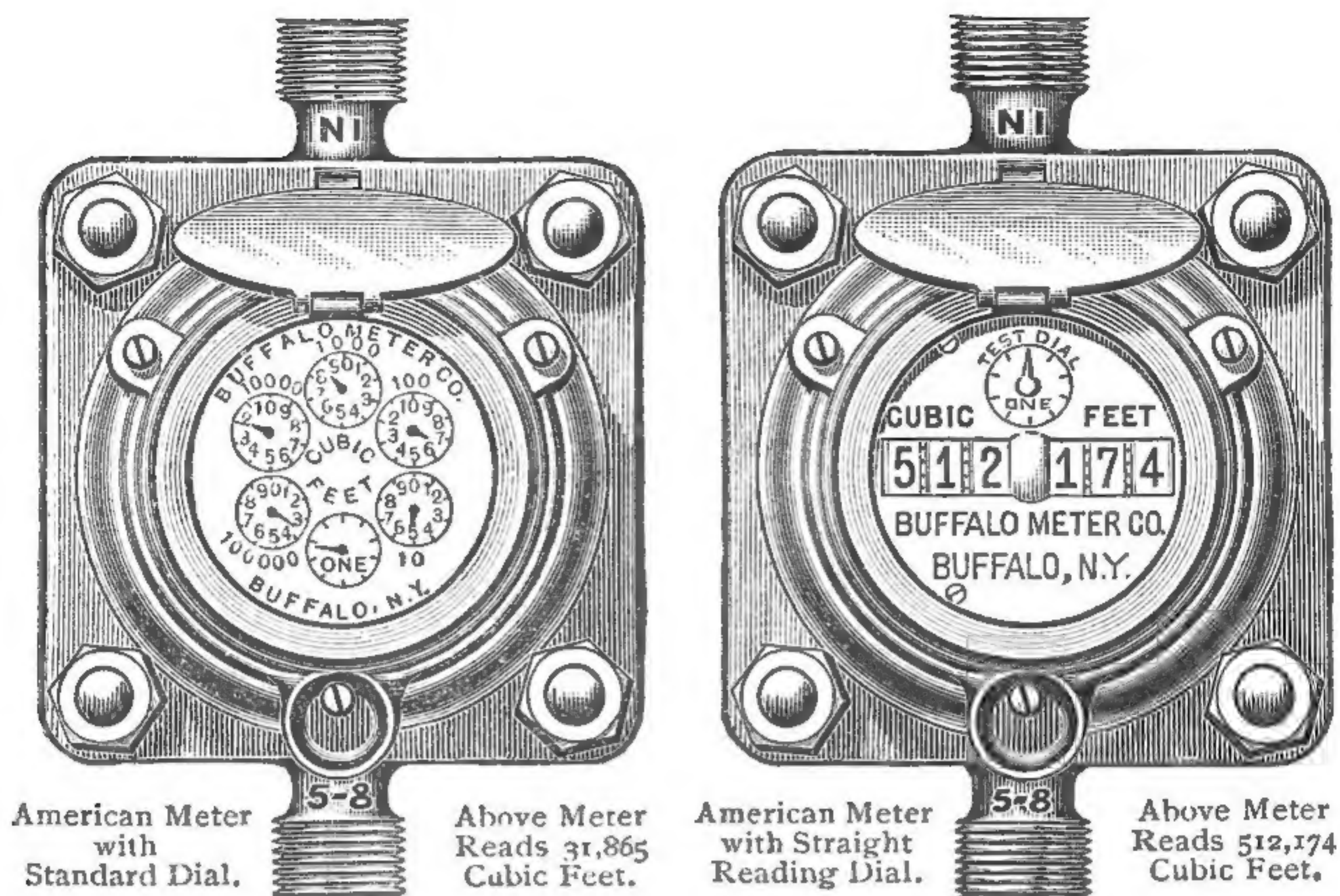


### Buffalo Meter Co.,

363 WASHINGTON ST.,

BUFFALO, N. Y., U. S. A.





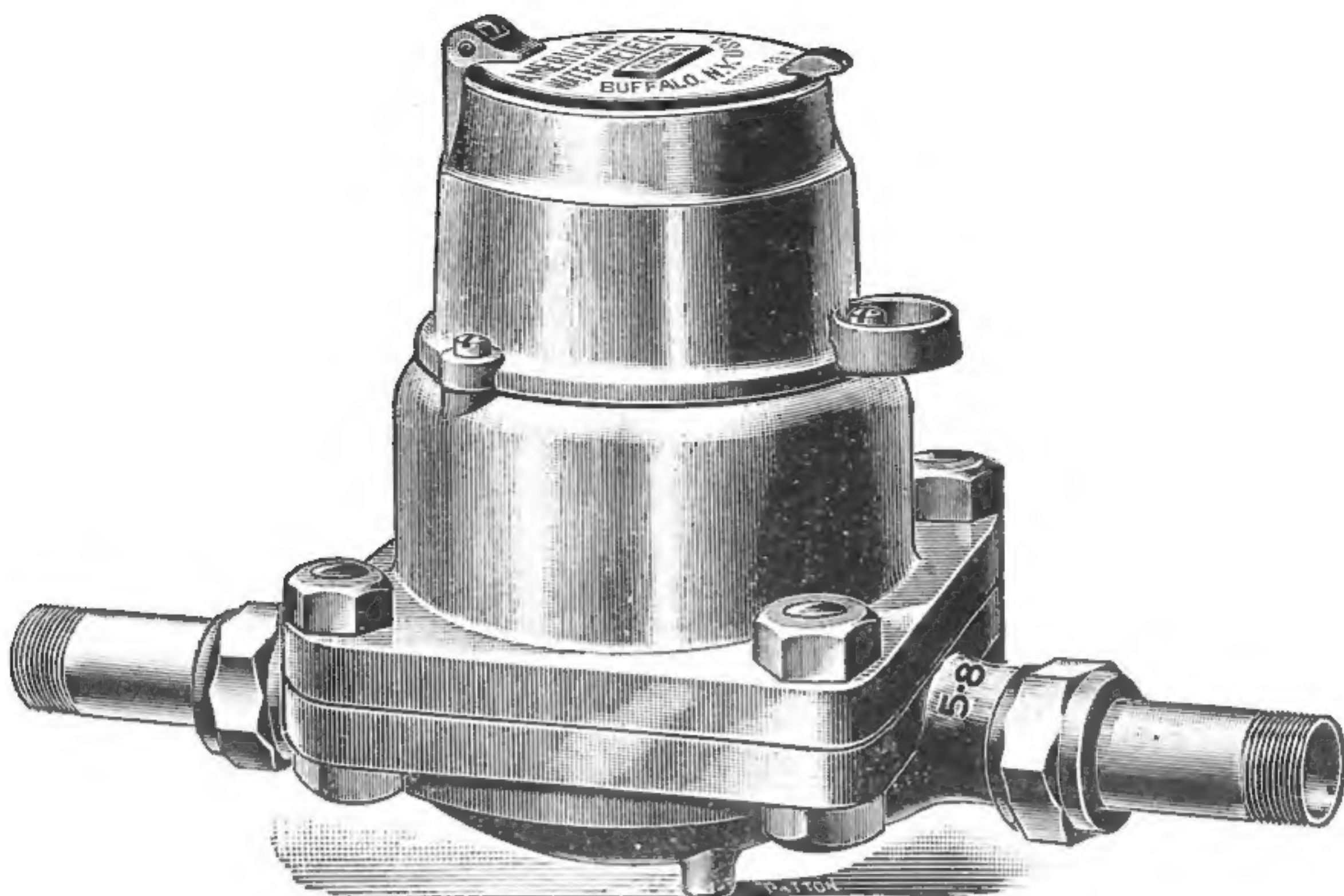
## NEW AMERICAN METER WITH FLAT DISC AND GRAVEL CHAMBER.

UNLESS order specifies differently we fit all "American" Meters with Standard Indicators registering in cubic feet.

When specially ordered we can furnish these Meters with either Standard or Straight Reading Dials indicating in cubic feet, U. S. gallons, Imperial gallons, or cubic metres.

The working parts of the "American" Meter are unusually substantial and are carefully made on the interchangeable plan. They are made of Bronze Composition, Hard Brass, Hard Rubber and German Silver, and are removable from the outside case, which is regularly made of a fine grade of cast iron carefully galvanized.





## PRICE LIST AMERICAN WATER METER

PATENTED.

Diameter of Opening in Meter.	Price of Meter, Gal. Iron Case.	Price of Meter, Gun Metal Case.	Price of Couplings.	Price of Short Strainers.
$\frac{1}{2}$ or $\frac{5}{8}$ in.	\$12.00	\$15.00	\$0.70	\$0.20
$\frac{3}{4}$ "	18.00	22.50	1.00	0.30
1 "	24.00	30.00	1.35	0.40
$1\frac{1}{2}$ "	46.70	58.35	2.50	0.80

### CAPACITY.

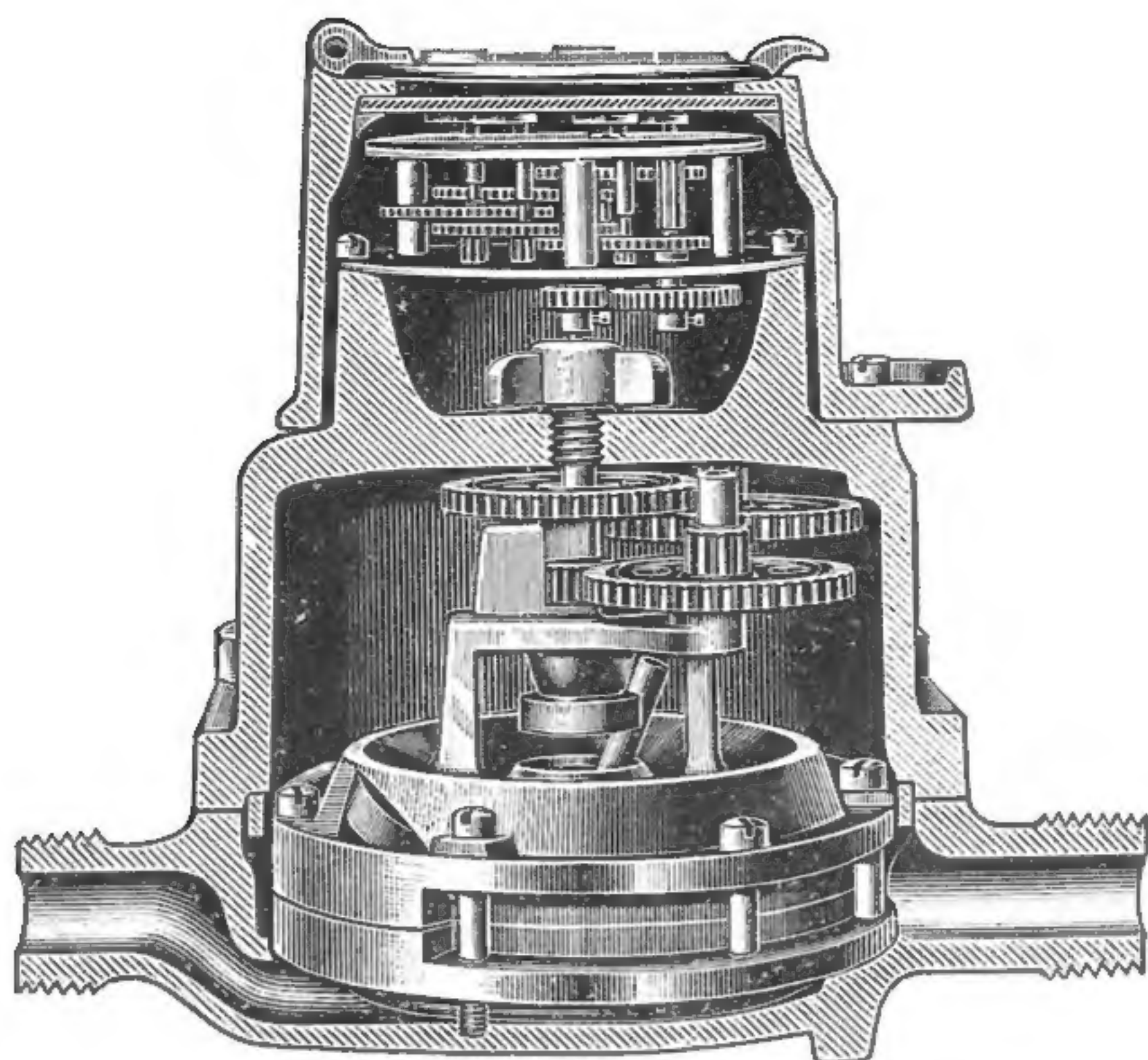
Size of Meter.	Greatest Proper Quantity per Minute	Capacity in Cubic Feet per Minute under the Loss of Pressure Mentioned.				
		10 lbs.	20 lbs.	30 lbs.	40 lbs.	50 lbs.
$\frac{5}{8}$ in.	2 cub. ft.	2 cu. ft.	$2\frac{1}{2}$ cu. ft.	3 cu. ft.	$3\frac{1}{2}$ cu. ft.	4 cu. ft.
$\frac{3}{4}$ "	4 "	$3\frac{1}{4}$ "	$4\frac{1}{4}$ "	$5\frac{1}{4}$ "	6 "	$6\frac{1}{2}$ "
1 "	8 "	6 "	$7\frac{3}{4}$ "	$9\frac{1}{2}$ "	11 "	12 "
$1\frac{1}{2}$ "	12 "	10 "	$13\frac{3}{4}$ "	$16\frac{1}{4}$ "	$18\frac{1}{4}$ "	20 "

### DIMENSIONS AND WEIGHT.

Size of Meter.	Length.	Height	Width.	Weight Meter Only.	Wt. with Couplings Boxed.
$\frac{5}{8}$ in.	$7\frac{1}{4}$ in.	$6\frac{3}{4}$ in.	5 in.	$11\frac{1}{4}$ lbs.	$14\frac{1}{4}$ lbs.
$\frac{3}{4}$ "	9 "	$7\frac{3}{4}$ "	8 "	$18\frac{1}{4}$ "	24 "
1 "	$10\frac{7}{8}$ "	$8\frac{1}{2}$ "	$8\frac{5}{8}$ "	26 "	34 "
$1\frac{1}{2}$ "	$13\frac{1}{4}$ "	$9\frac{1}{2}$ "	$11\frac{1}{8}$ "	46 "	58 "

For convenience, when orders will permit, 6 of the  $\frac{5}{8}$  Meters are packed in a case weighing 90 pounds.

No charge for boxing or cartage.



## AMERICAN METER.

SECTIONAL VIEW.

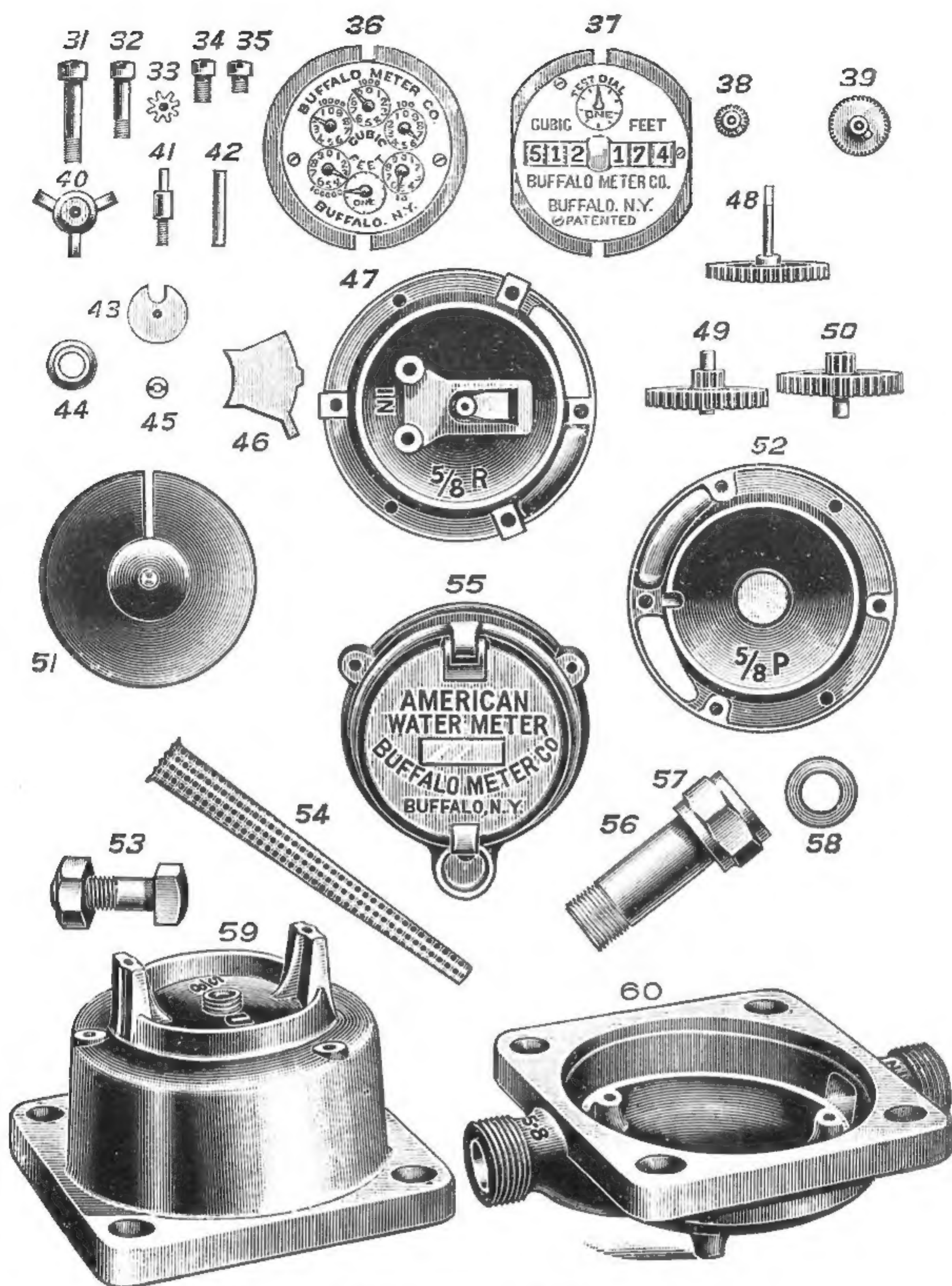
THE MEASURING DISC of the "American" Meter is flat and much thicker than those heretofore used in disc meters.

The GRAVEL CHAMBER extends around the outside of the measuring chamber, and is arranged to catch and hold all large foreign substances and prevent them blocking or injuring the working parts. It is immediately accessible on removing the top of the outside case.

Should the meter freeze usually one-half the outside case breaks, thus relieving the inner and more expensive parts from injurious strain. A broken half of case is very easily and cheaply replaced.

Each meter is carefully tested for accuracy and to a hydraulic pressure of 300 pounds per square inch before shipping.

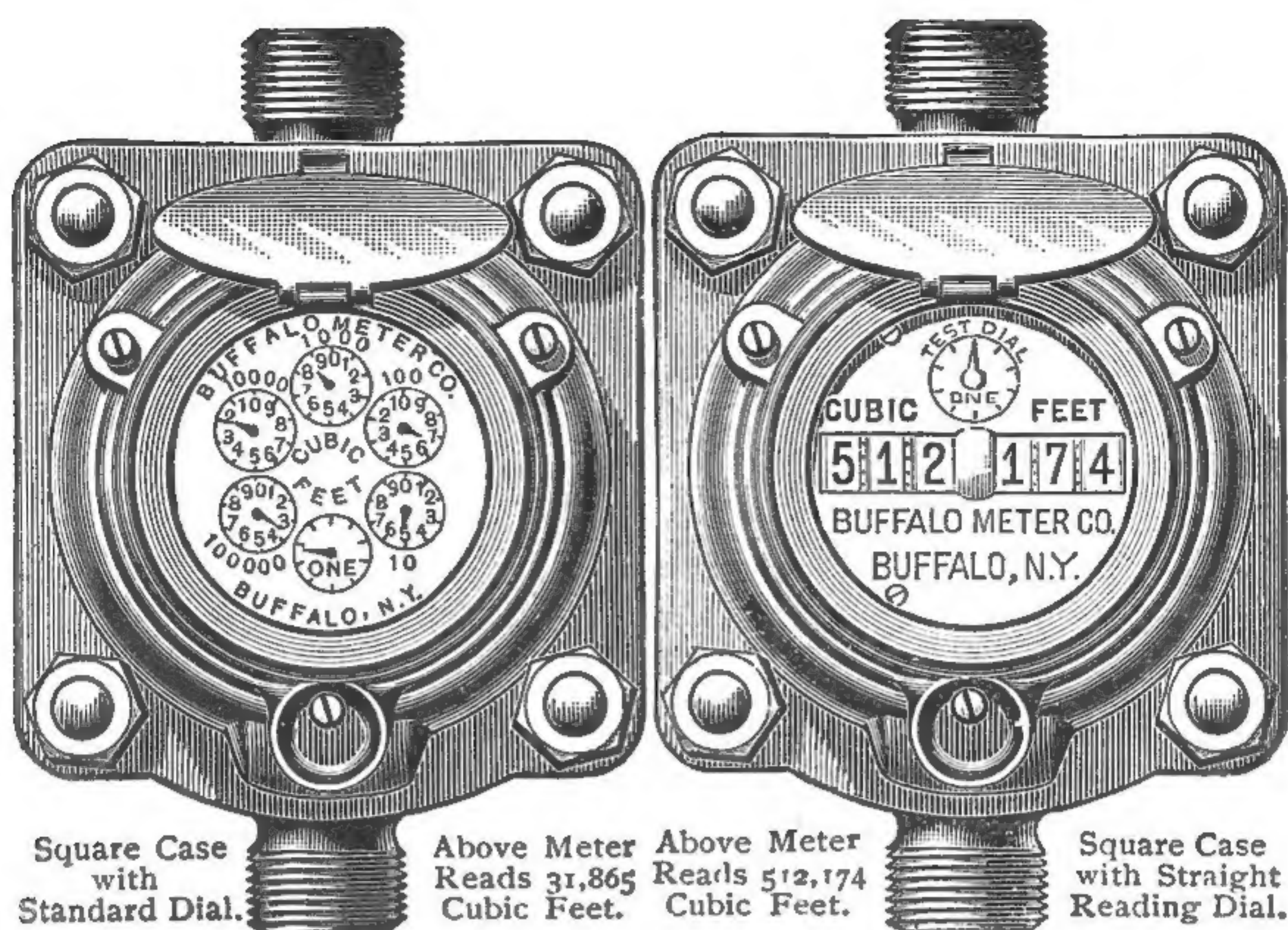




1/2 OR 5/8 AMERICAN METER PARTS.

- |                                 |                                   |
|---------------------------------|-----------------------------------|
| 31. Long Disc Chamber Screw.    | 46. Partition Plate.              |
| 32. Short Disc Chamber Screw.   | 47. " R " Half Disc Chamber.      |
| 33. Intermediate Pinion.        | 48. Stuffing Box Gear and Shaft.  |
| 34. Indicator Case Screw.       | 49. First Intermediate Gear.      |
| 35. Indicator Holding Screw.    | 50. Second Intermediate Gear.     |
| 36. Standard Indicator.         | 51. Measuring Disc.               |
| 37. Straight Reading Indicator. | 52. " P " Half Disc Chamber.      |
| 38. Meter Change Gear.          | 53. 1/2 x 1 1/2 inch Flange Bolt. |
| 39. Indicator Change Gear.      | 54. Coupling Strainer.            |
| 40. Stuffing Box Nut.           | 55. Indicator Case.               |
| 41. Pinion Driving Shaft.       | 56. Coupling Spigot.              |
| 42. Intermediate Gear Shaft.    | 57. Coupling Nut.                 |
| 43. Pinion Driving Block.       | 58. Coupling Washer.              |
| 44. Roller.                     | 59. " U " Top of Outside Case.    |
| 45. Driving Block Jamb Nut.     | 60. " L " Bottom of Outside Case. |





## NEW SQUARE CASE NIAGARA METER WITH CONICAL MEASURING DISC.

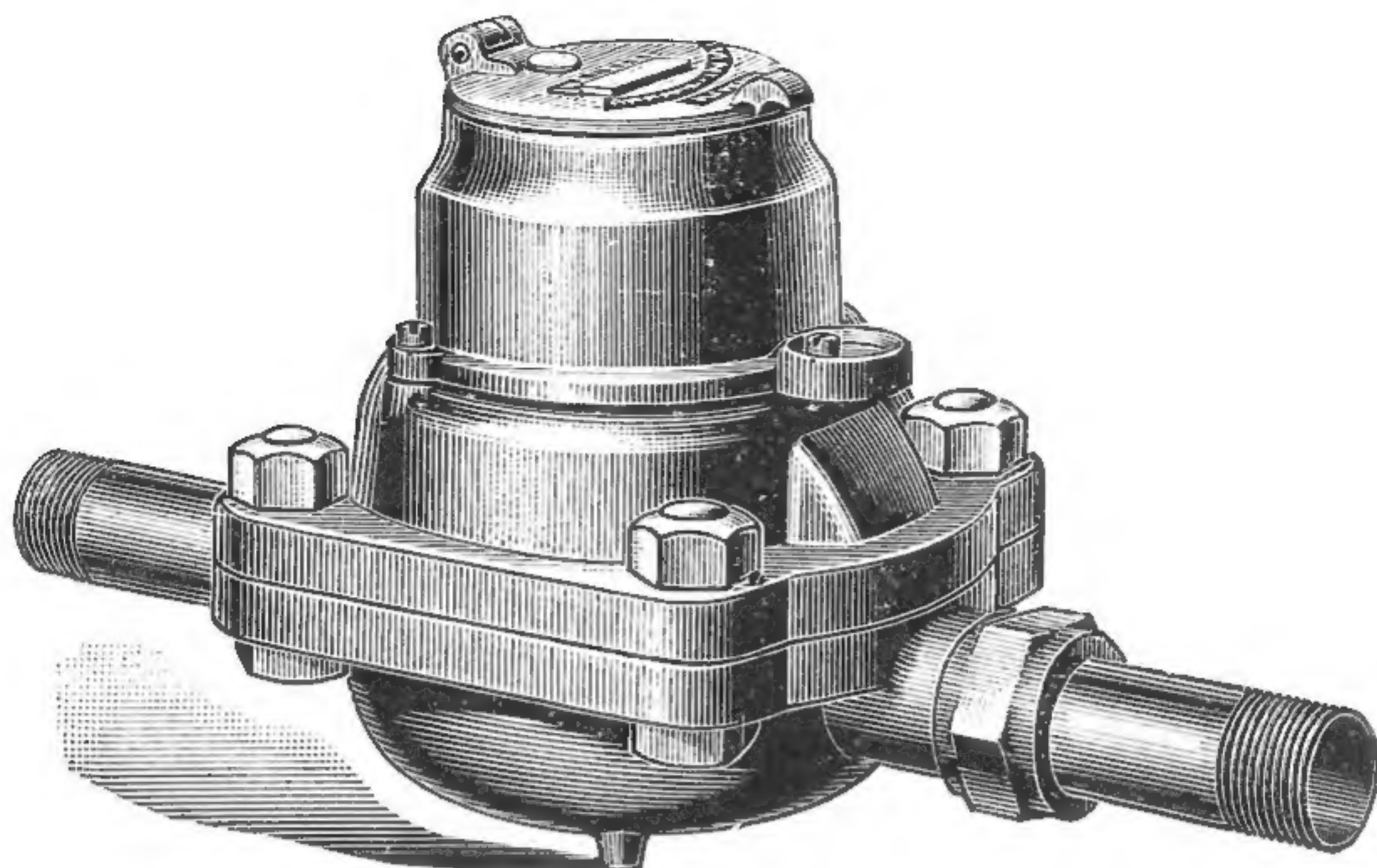
THIS shows face views of the  $\frac{1}{2}$  or  $\frac{5}{8}$  and  $\frac{3}{4}$  inch "Niagara" Meter. All sizes of these Meters are fitted with Standard Indicators reading in cubic feet, and with galvanized iron outside cases unless order specifies differently.

When specially ordered we can furnish these Meters with Standard or Straight Reading Dials indicating in cubic feet, U. S. gallons, imperial gallons, or cubic metres.

The  $\frac{1}{2}$  or  $\frac{5}{8}$  and  $\frac{3}{4}$  "Niagara" Meters with bronze or gun metal outside cases are of the round flange pattern shown on outside of front cover.

Over 40,000 of these Meters are in use.





## PRICE LIST

# NIAGARA WATER METER

PATENTED.

Diameter of Opening in Meter.	Price of Meter, Gal. Iron Case.	Price of Meter, Gun Metal Case.	Price of Couplings.	Price of Short Strainers.
$\frac{1}{2}$ or $\frac{5}{8}$ in.	\$10.00	\$13.35	\$0.70	\$0.20
$\frac{3}{4}$ "	10.00	13.35	1.00	0.30
1 "	20.00	26.70	1.35	0.40
$1\frac{1}{2}$ "	35.00	50.00	2.50	0.80
2 "	50.00	83.35	3.35	1.00

### CAPACITY.

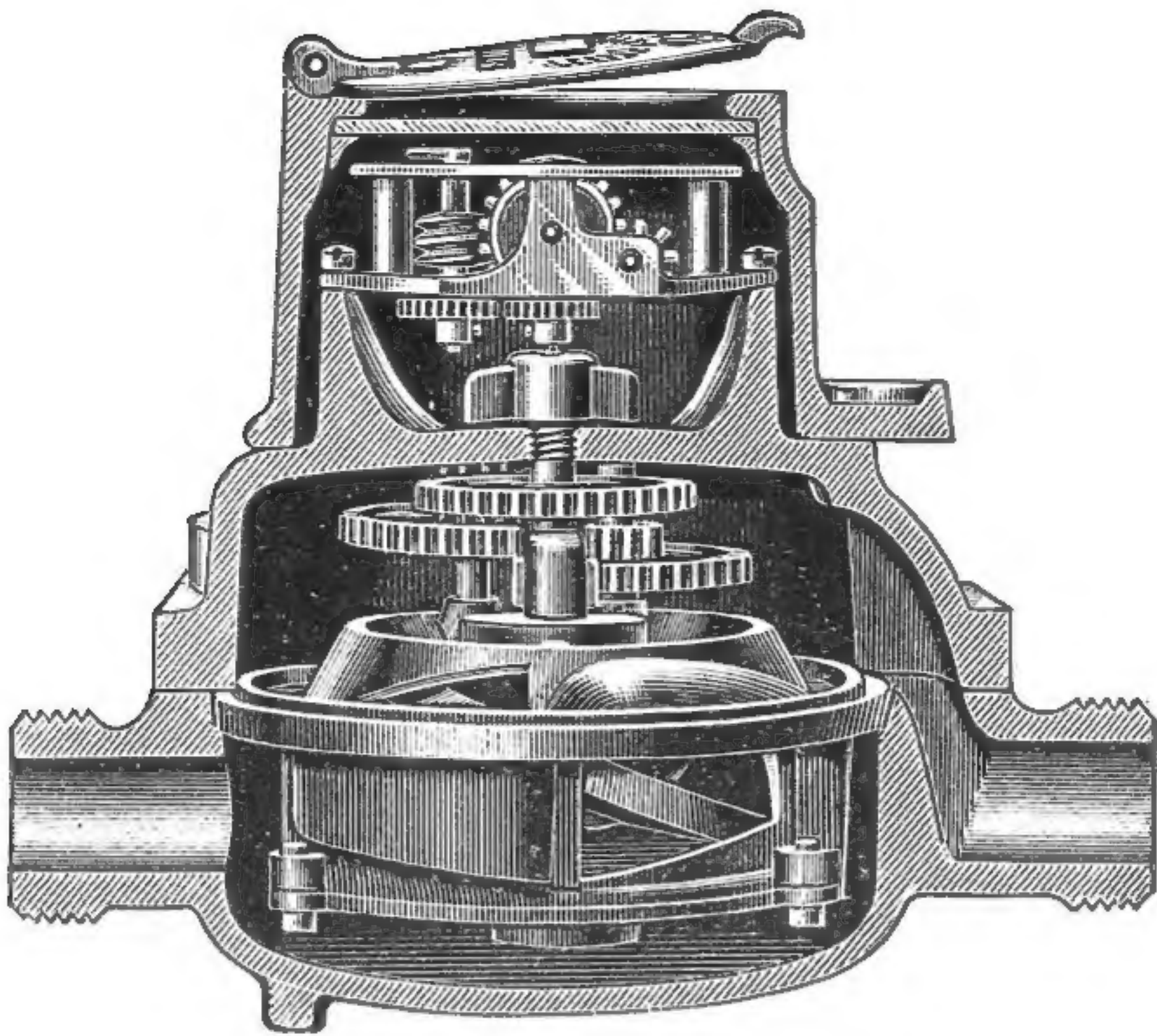
Size of Meter.	Greatest Proper Quantity per minute	Capacity in Cubic Feet per Minute under the Loss of Pressure mentioned.				
		10 lbs.	20 lbs.	30 lbs.	40 lbs.	50 lbs.
$\frac{5}{8}$ in.	2 cu. ft.	$2\frac{1}{2}$ cu. ft.	$3\frac{1}{4}$ cu. ft.	4 cu. ft.	$4\frac{1}{2}$ cu. ft.	5 cu. ft.
$\frac{3}{4}$ "	4 "	$3\frac{1}{4}$ "	$4\frac{1}{4}$ "	$5\frac{1}{4}$ "	6 "	$6\frac{1}{2}$ "
1 "	8 "	6 "	7 "	$8\frac{1}{2}$ "	10 "	12 "
$1\frac{1}{2}$ "	12 "	$10\frac{1}{4}$ "	$14\frac{1}{4}$ "	17 "	19 "	$20\frac{1}{2}$ "
2 "	20 "	20 "	25 "	30 "	35 "	40 "

### DIMENSIONS AND WEIGHT.

Size of Meter.	Length.	Height	Width.	Weight Meter Only.	Wt. with Couplings Boxed.
$\frac{5}{8}$ in.	$7\frac{1}{4}$ in.	$6\frac{1}{4}$ in.	5 in.	$10\frac{1}{2}$ lbs.	$13\frac{1}{4}$ lbs.
$\frac{3}{4}$ "	$7\frac{1}{4}$ "	$6\frac{1}{4}$ "	5 "	$10\frac{3}{4}$ "	14 "
1 "	$10\frac{1}{2}$ "	$7\frac{1}{4}$ "	$8\frac{1}{4}$ "	$19\frac{3}{4}$ "	27 "
$1\frac{1}{2}$ "	$13\frac{1}{4}$ "	$9\frac{1}{4}$ "	$10\frac{3}{4}$ "	$39\frac{1}{2}$ "	$52\frac{1}{4}$ "
2 "	$15\frac{1}{2}$ "	10 "	13 "	68 "	$86\frac{1}{2}$ "

For convenience, when orders will permit, 6 of the  $\frac{5}{8}$  or  $\frac{3}{4}$  Meters are packed in a case weighing 80 pounds.

No charge for boxing or cartage.



## NIAGARA METER.

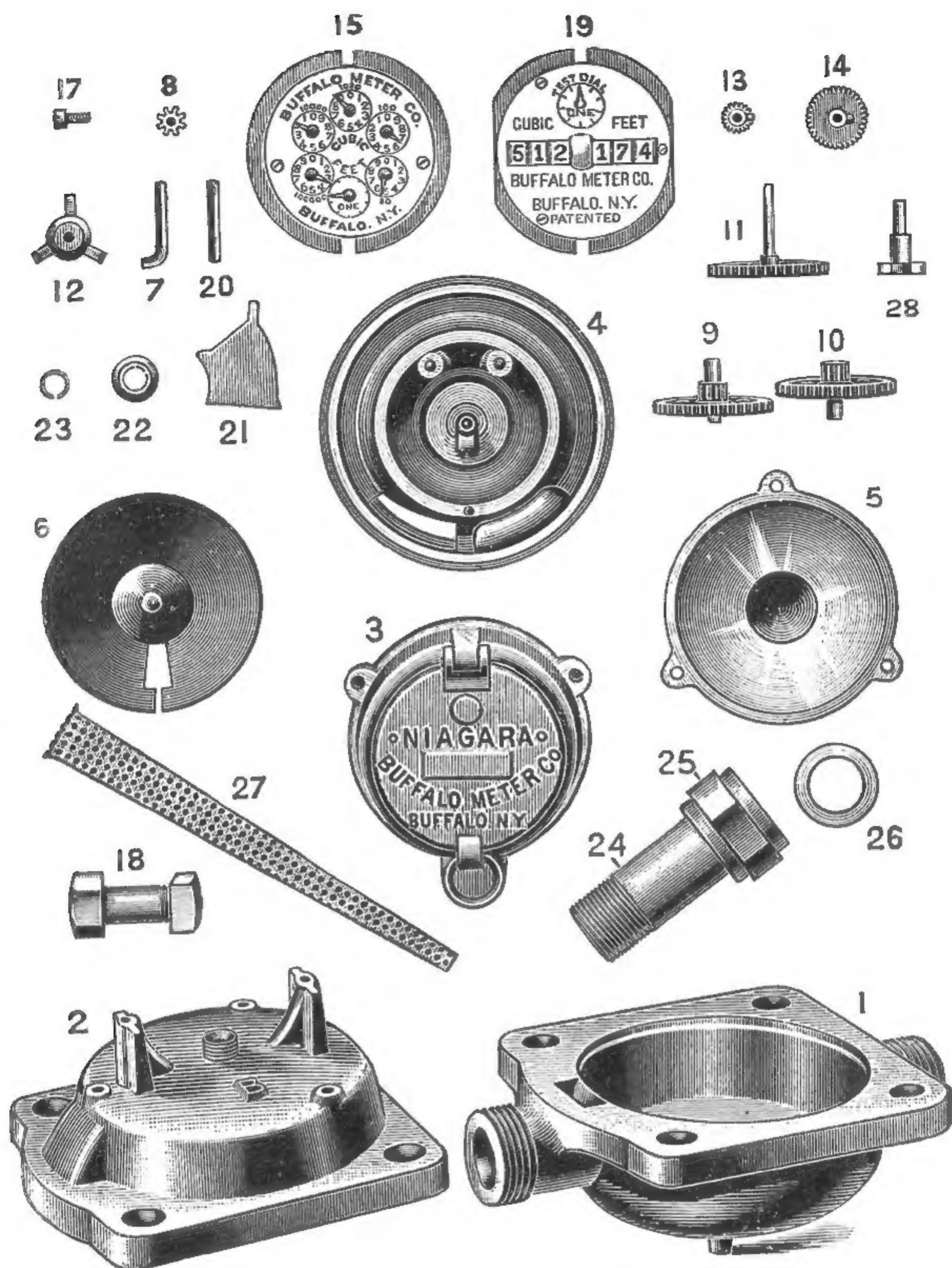
SECTIONAL VIEW.

THE “Niagara” Meter has a conical measuring disc, and is unusually accessible in every part.

The outer case of the Niagara Meter is regularly made of galvanized cast iron, so proportioned that should the Meter freeze, usually one-half will break, thus relieving the inner and more expensive parts from injurious strain. The broken half of case is very cheaply replaced. The working parts are separate and removable from the outer case, and are carefully made of German silver, bronze, brass and hard rubber, and are interchangeable throughout.

Each Meter is carefully tested for accuracy and to a hydraulic pressure of 300 pounds per square inch before shipping.



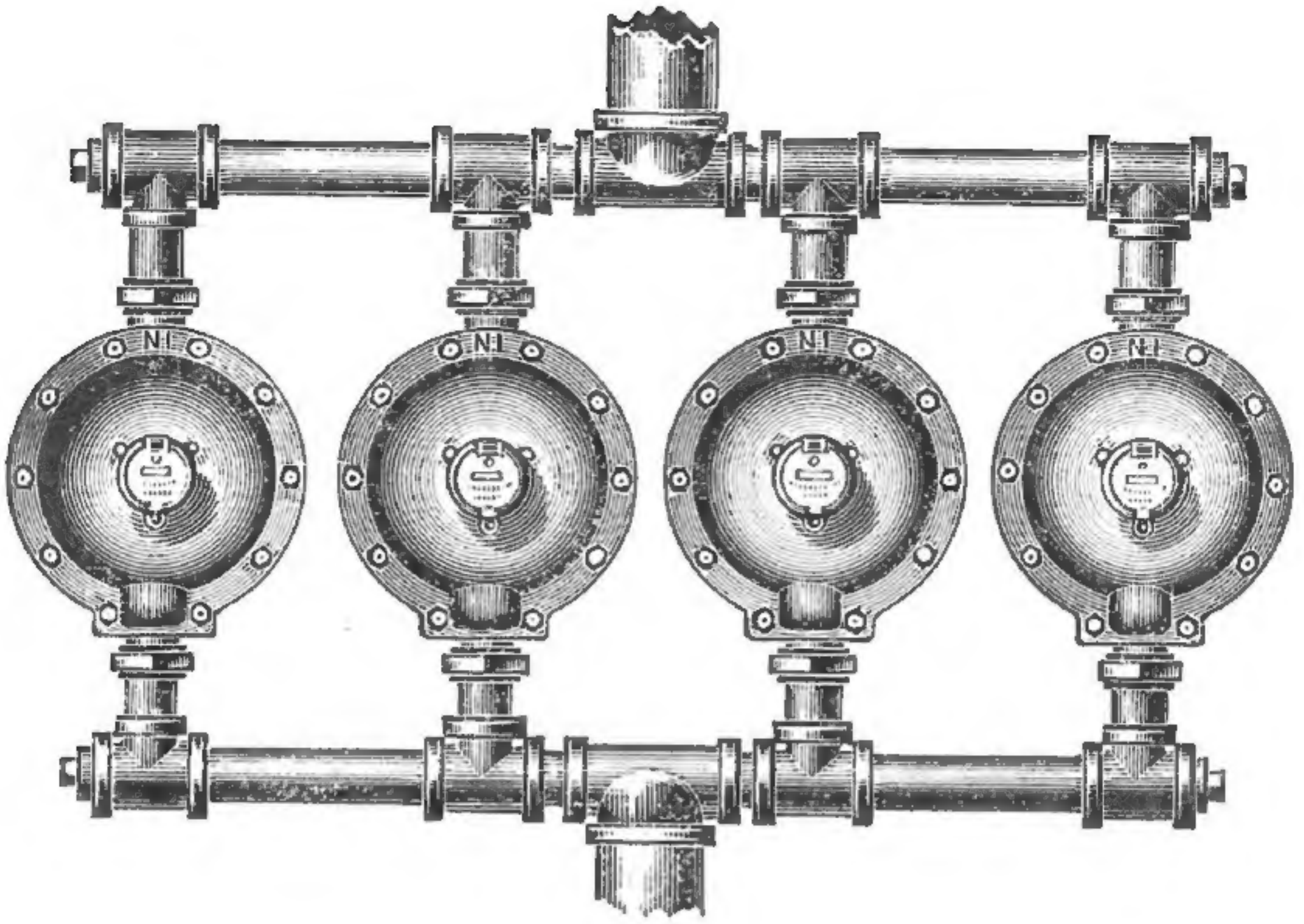


$\frac{1}{2}$  OR  $\frac{5}{8}$  AND  $\frac{3}{4}$  NIAGARA METER PARTS.

- |                                   |                                 |
|-----------------------------------|---------------------------------|
| 1. Bottom of Outside Case.        | 15. Standard Indicator.         |
| 2. Top of Outside Case.           | 16. Flange Bolt, Round Meter.   |
| 3. Indicator Case.                | 17. Brass Screw.                |
| 4. Measuring Chamber.             | 18. Flange Bolt, Square Meter.  |
| 5. Bottom Plate.                  | 19. Straight Reading Indicator. |
| 6. Measuring Disc.                | 20. Intermediate Gear Shaft.    |
| 7. Bent Pinion Shaft (old style). | 21. Partition Plate.            |
| 8. Intermediate Pinion.           | 22. Roller.                     |
| 9. First Intermediate Gear.       | 23. Roller Ring.                |
| 10. Second Intermediate Gear.     | 24. Coupling Spigot.            |
| 11. Stuffing Box Gear and Shaft.  | 25. Coupling Nut.               |
| 12. Stuffing Box Nut.             | 26. Coupling Washer.            |
| 13. Meter Change Gear.            | 27. Coupling Strainer.          |
| 14. Indicator Change Gear.        | 28. Pinion Driver (new style).  |

GIVE SIZE AND NUMBER OF METER WHEN ORDERING PARTS.

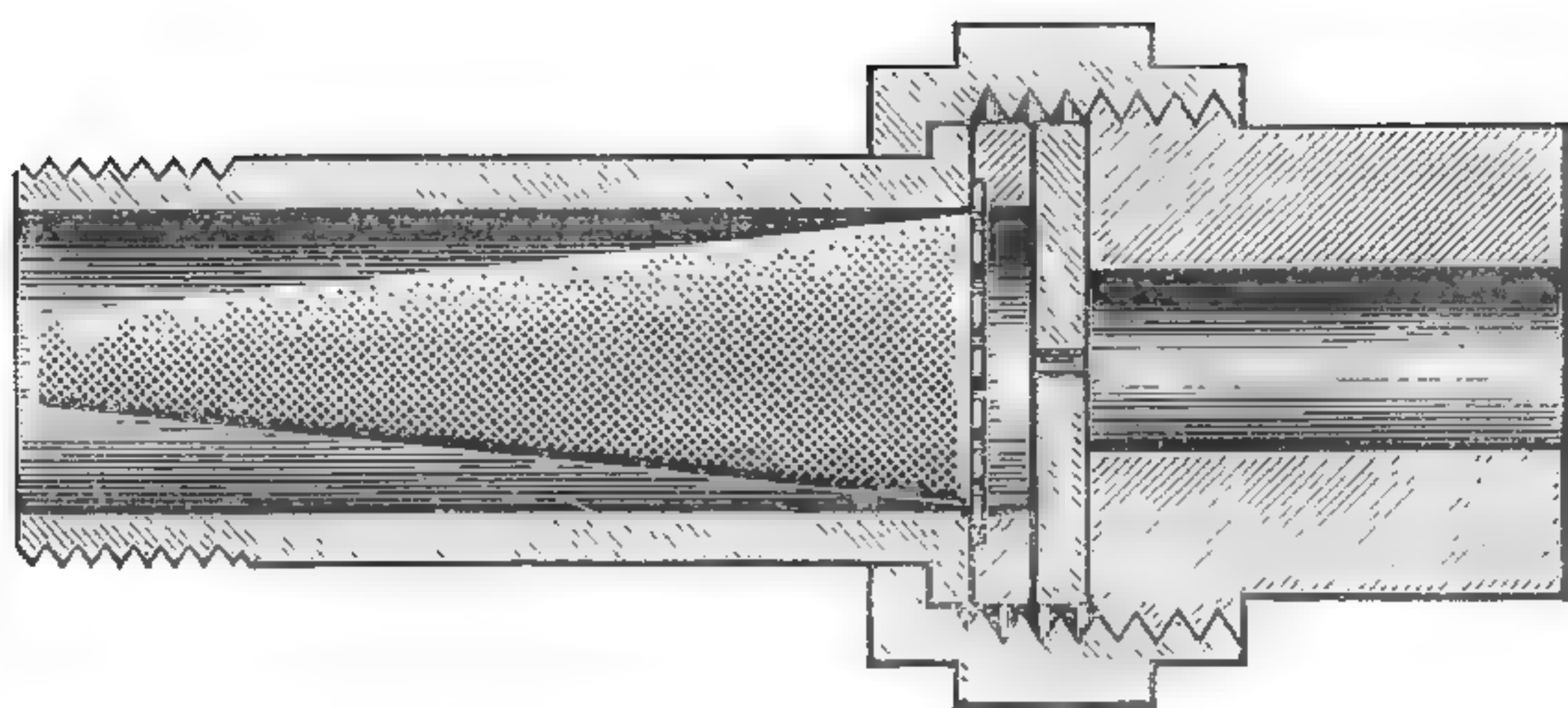




### BATTERY OF 2-INCH NIAGARA METERS.

WHEN a larger capacity is needed than that afforded by our two-inch Meters, several of them may be set in a battery with excellent results. The connections can be easily and cheaply made of ordinary pipe fittings, by the party setting the Meters, or we will furnish the connections at cost of fittings and labor. The two-inch "Niagara" Meters having union couplings are especially adapted to be set in batteries.



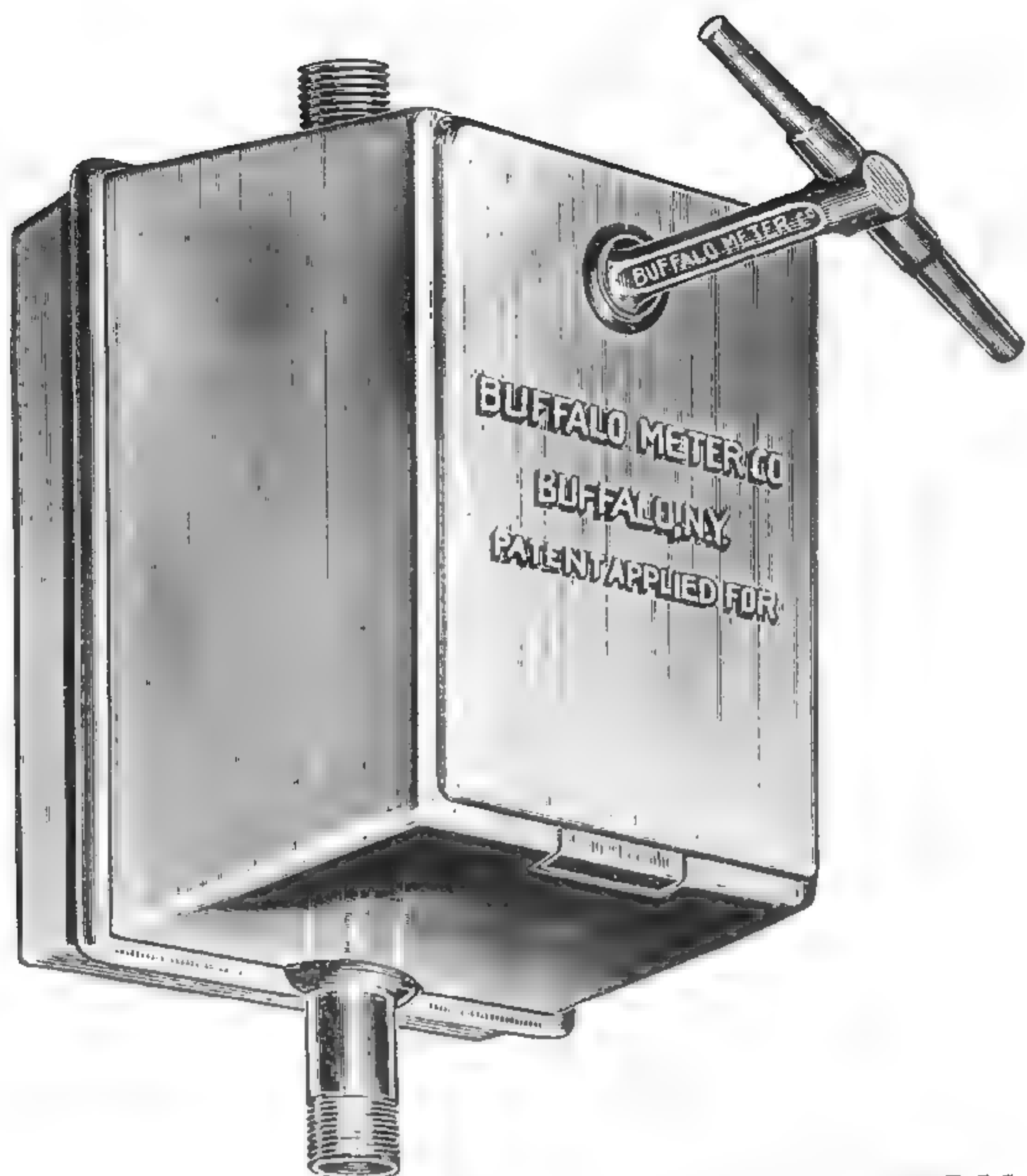


## JET METER FOR FILLING SEWER FLUSH TANKS.

**T**HIS METER consists of a washer with opening of the right size to give any required continuous flow per day, and is especially suited for filling sewer automatic flush tanks, where the pressure is uniform. It contains a strainer made of perforated sheet brass covered with fine wire gauze to prevent the hole in washer from becoming stopped by foreign substances in the water. The strainer is easily removed for purpose of cleaning. Gas is supplied to street lamps at a known flow per hour, and flush tanks may be supplied with water in the same manner with this meter.

Price of Jet Meter, - - \$5.00.



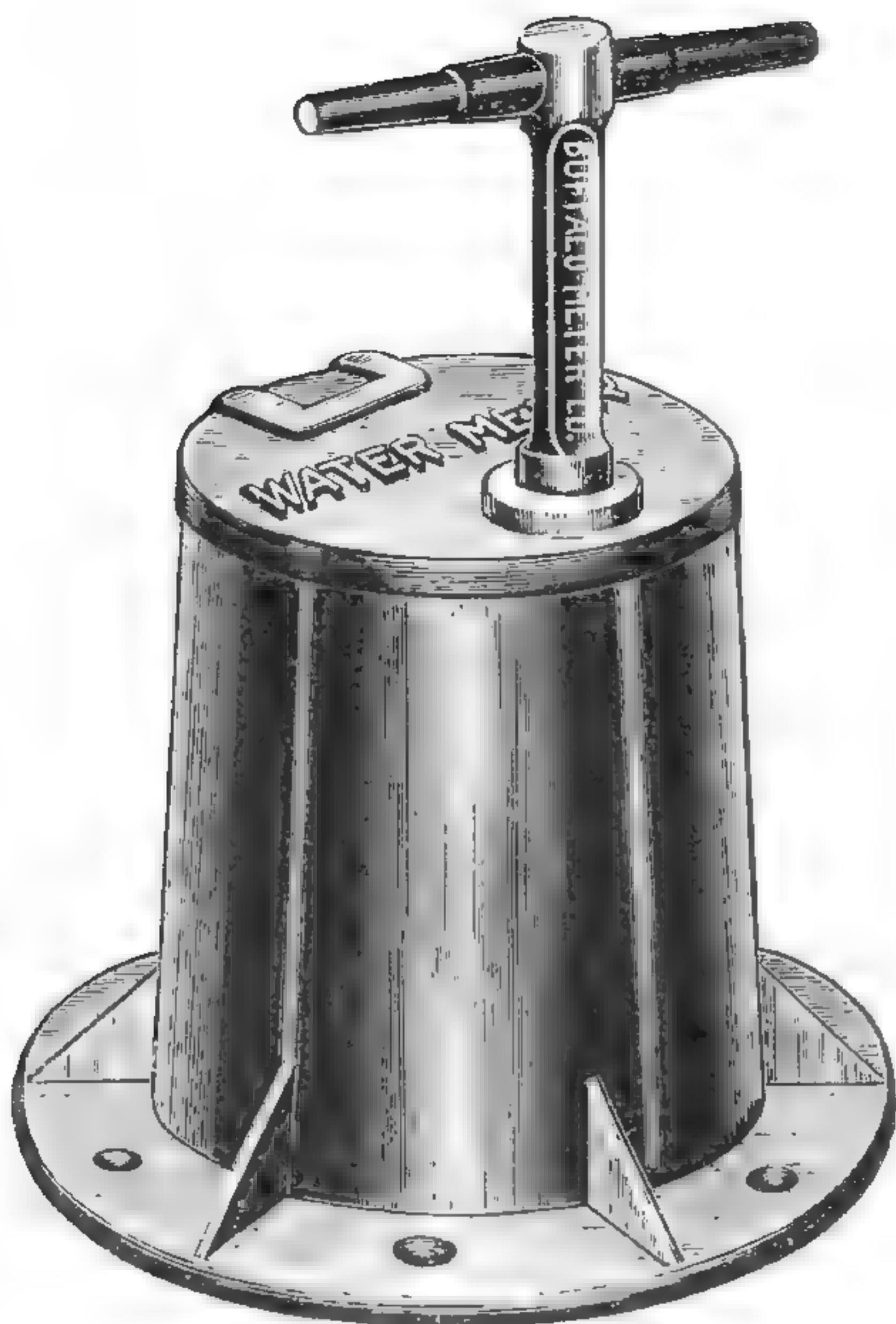


### IRON LOCK BOX.

HERE is shown a new iron Lock Box for inclosing a  $\frac{1}{2}$  or  $\frac{5}{8}$  "American" Meter and  $\frac{1}{2}$  or  $\frac{5}{8}$  and  $\frac{3}{4}$  inch "Niagara" Meter and coupling nuts so as to prevent the Meter being tampered with when placed in an exposed situation. It is in halves that bolt securely about the Meter with the bolts on the inside of box. It is unlocked, as shown, with a Key Wrench which also fits the bolts on the inside of box. The door opens on a hinge joint, and the whole box is varnished black and presents a neat appearance.

Price of Iron Lock Box.    -    -    \$3.00.



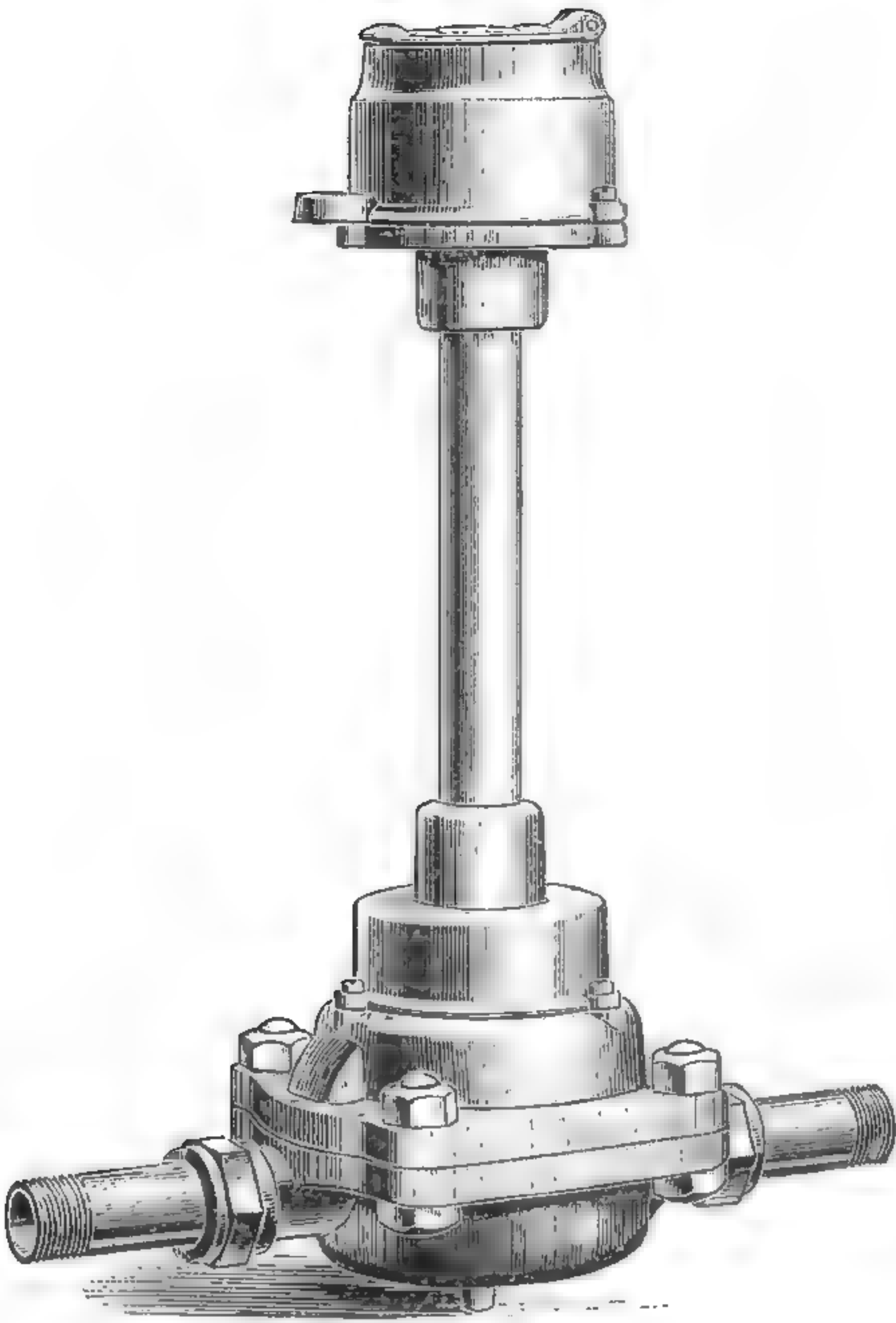


### EXTENSION DIAL CURB BOX.

**T**HIS is a view of a new and low priced iron Curb Box, to cover Extension Dial where meter is buried in the ground. After the Meter with extension dial is set in the ground, dirt or saw dust is packed around it to about ten inches from the surface of the ground so Meter cannot freeze. A couple of short boards are then placed one on each side of the Extension Dial and the curb box placed on them. The lid has a hinge joint and is opened with a Key Wrench as shown. The whole is varnished black.

Price of Curb Box,     -     -     \$1.50.





### METER WITH DIAL EXTENSION.

**W**HEN Meters are buried in the ground or box of saw dust to prevent freezing, extensions for dials, as shown above, can be furnished of any desired length that will fit all sizes. Extensions are easily shortened to any required length with ordinary pipe tools.

These extensions are furnished to fit either the American or the Niagara Meters. No water from the Meter enters the extension.

**Dial Extension not over four feet long, \$2.50.**

Longer extensions, price in proportion.



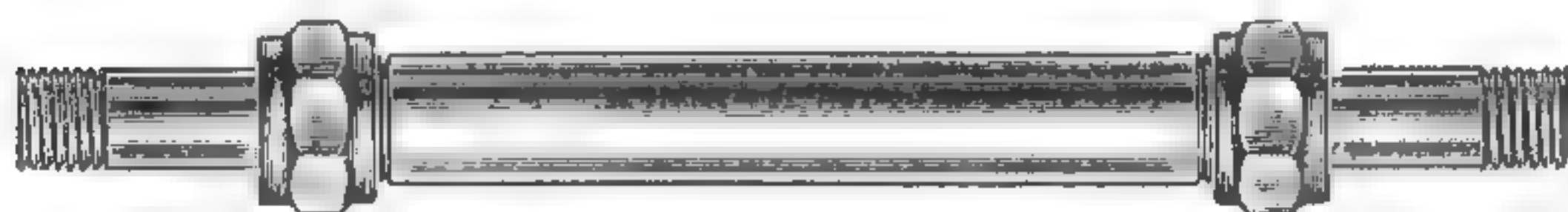
## SETTING METERS.

**I**N setting Meters be sure that all gravel, mud and pipe chips are flushed out of service pipe before attaching Meter. Also, avoid using red lead or other paint on pipe joints between main and Meter as it is liable to work into Meter and clog the working parts.

The “ American ” and the “ Niagara ” Meters will operate in any position, but the indicators are put on so as to read when Meter is set level with outlet towards the reader, as this is the usual and best way to set them.

Should it be more convenient to set the Meter in the vertical pipe, the indicator should be turned one-half way around, if the outlet is to be upward.

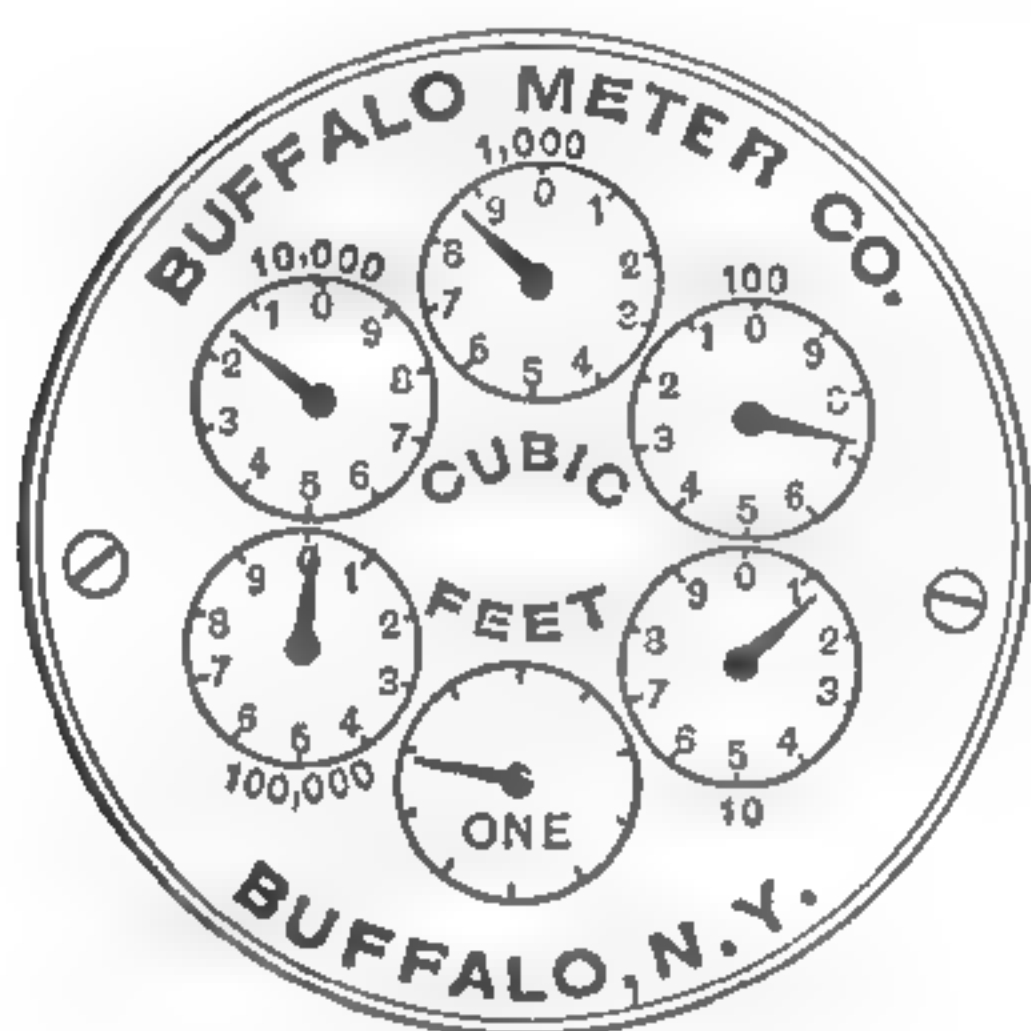
While we recommend that all Meters should be set with couplings, the spuds are threaded to fit a size larger pipe than the opening in the Meter, and they may therefore be set without couplings if desired.



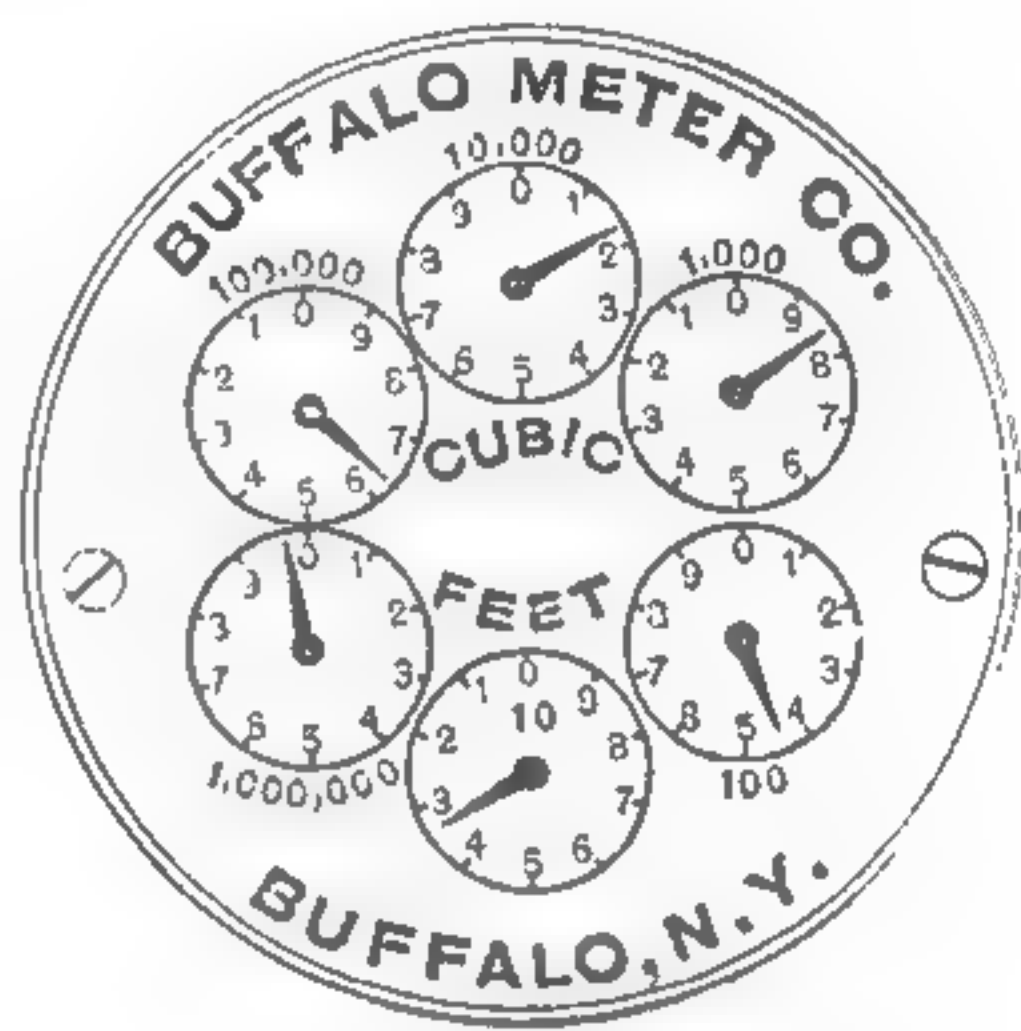
In some places plumbers are not allowed to set the Meters, but are given the couplings, and a piece of pipe just the length of the Meter, as shown above. After the service has been well flushed out, the Superintendent of Meters takes out the pipe between the couplings and sets the Meter himself.

## READING METERS.

CONFORMING to the general custom in the United States and Canada, our regular water meters register in cubic feet the same as gas meters. For special or foreign use, we make them to register in U. S. gallons, imperial gallons, hectolitres, or cubic metres.



Half size view of one foot dial used on  $\frac{1}{2}$  or  $\frac{5}{8}$  and  $\frac{3}{4}$  inch Meter, reading 1871 cubic feet.



Half size view of ten foot dial used on 1,  $1\frac{1}{2}$  and 2 inch Meters, reading 961843 cubic feet.

To read the Dials take the lesser figure of the two between which the pointer stands in each circle. Each division of any circle stands for one-tenth of the whole number indicated by that circle. If any pointer is on a figure the figure should be taken only when the pointer in the next lower circle is at or beyond 0. The difference between any two readings, shows the quantity of water registered during the intermediate time in cubic feet.





### METER BOOKS.

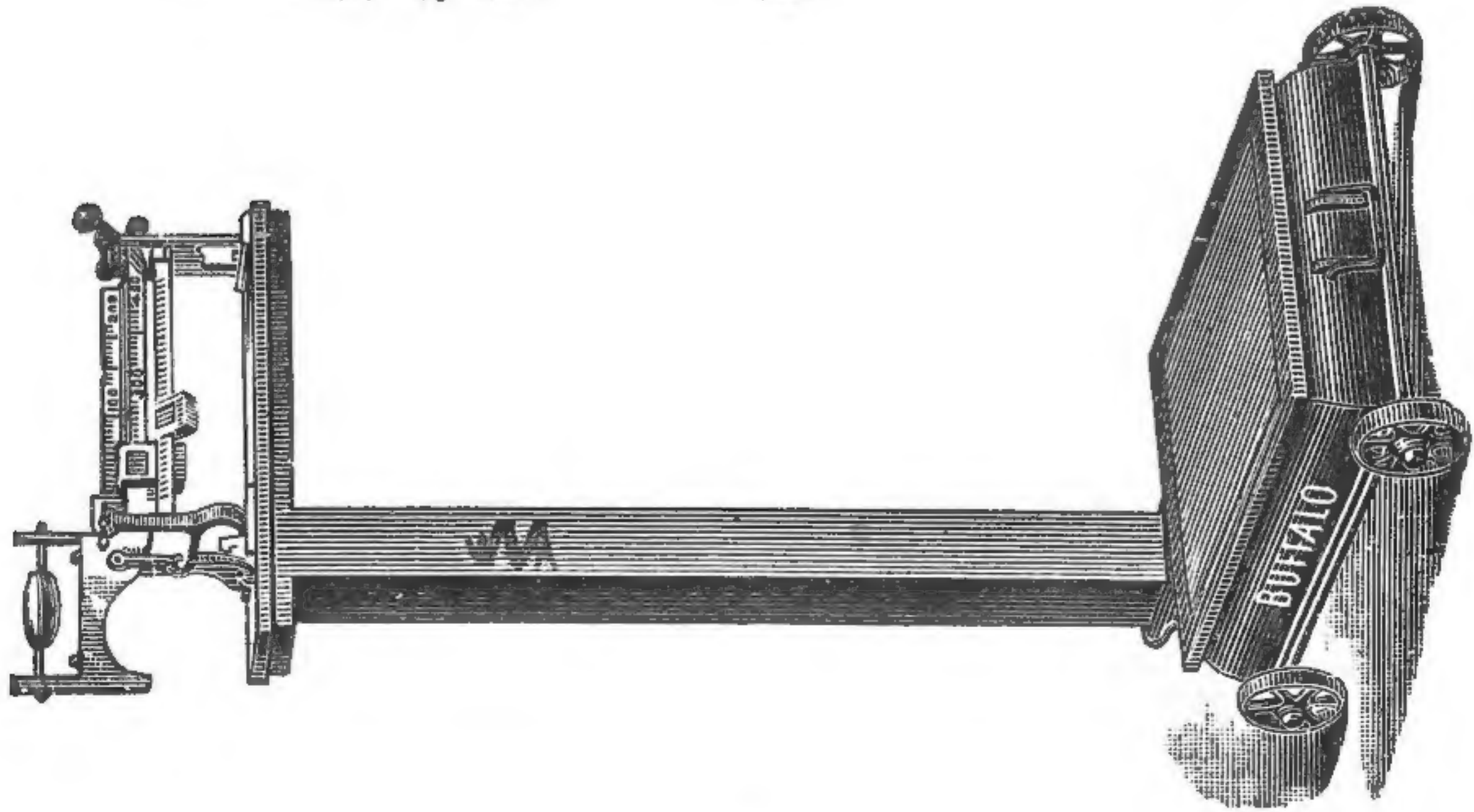
The Meter Record Book contains an index and 300 pages. It is 8 inches wide,  $10\frac{1}{2}$  inches long and  $1\frac{1}{8}$  inches thick. The binding is dark pebble cloth with red leather back and corners. It is usually kept at the office, and the readings entered from a small pocket reading book.

The Pocket Reading Book contains 100 double pages of 20 lines each. It is  $4\frac{3}{4}$  inches wide,  $8\frac{1}{2}$  inches long and  $\frac{5}{8}$  of an inch thick and is easily carried in the pocket. The binding is of stiff drab canvas with flap for keeping the place while reading meters.

Price of Meter Record Book, - \$5.00

Price of Meter Reading Book, - 1.70





# TESTING SCALES.

(PATENTED.)

**PLATFORM SCALES** with patent combination beam, especially adapted for testing water meters. The full capacity is on the three beams and no loose weights are required.

No. 1 Graduations, all lbs.

Top or tare beam weighs to 200 lbs. by 1 lb., and is used to balance tank.  
 Center or main beam weighs to 800 lbs., and is notched for each 20 lbs.  
 Lower or unit beam weighs to 20 lbs. by tenths of a lb.

No. 2 Graduations, lbs. and cubic feet of 62½ lbs. each.

## PERCENTAGE SCALES.

Top or tare beam weighs to 200 lbs. by 1 lb., and is used to balance tank.  
 Center or main beam weighs to 12 cubic feet and is notched for each foot.  
 Lower or unit beam weighs to 2 cubic feet by one-hundredths of a cubic foot.

On 1 and 10 cubic foot tests No. 2 Graduations give the PERCENTAGE of meter from accuracy direct by reading the scales.

## PRICE OF SCALES.

Platform 26 x 17 inches, without wheels,	=	=	=	=	\$54.00
Platform 26 x 17 inches, with wheels.	=	=	=	=	58.00

Special Graduations, Tanks, etc., to Order.



# CONDENSED TABLE FOR REDUCING CUBIC FEET TO GALLONS.

BY USE of the following Table any number of cubic feet from 0 to 10,000 may be quickly reduced to U. S. gallons, one cubic foot containing 7.48052 gallons:

Cubic Feet.	0	1	2	3	4	5	6	7	8	9
0	Gallons.	7.48	14.96	22.44	29.92	37.40	44.88	52.36	59.84	67.32
10	74.81	82.29	89.77	97.25	104.73	112.21	119.69	127.17	134.65	142.13
20	149.61	157.09	164.57	172.05	179.53	187.01	194.49	201.97	209.45	216.93
30	224.42	231.90	239.38	246.86	254.34	261.82	269.30	276.78	284.26	291.74
40	299.22	306.70	314.18	321.66	329.14	336.62	344.10	351.58	359.06	366.55
50	374.03	381.51	388.99	396.47	403.95	411.43	418.91	426.39	433.87	441.35
60	448.83	456.31	463.79	471.27	478.75	486.23	493.71	501.19	508.68	516.16
70	523.64	531.12	538.60	546.08	553.56	561.04	568.52	576.00	583.48	590.96
80	598.44	605.92	613.40	620.88	628.36	635.84	643.32	650.81	658.29	665.77
90	673.25	680.73	688.21	695.69	703.17	710.65	718.13	725.61	733.09	740.57

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QUESTION.—Reduce 64 (sixty-four) cubic feet to gallons?

ANSWER.—Opposite 60 and under 4 we find 478 gallons, the correct answer, less the small decimal.

QUESTION.—Reduce 4700 (forty-seven hundred) cubic feet to gallons?

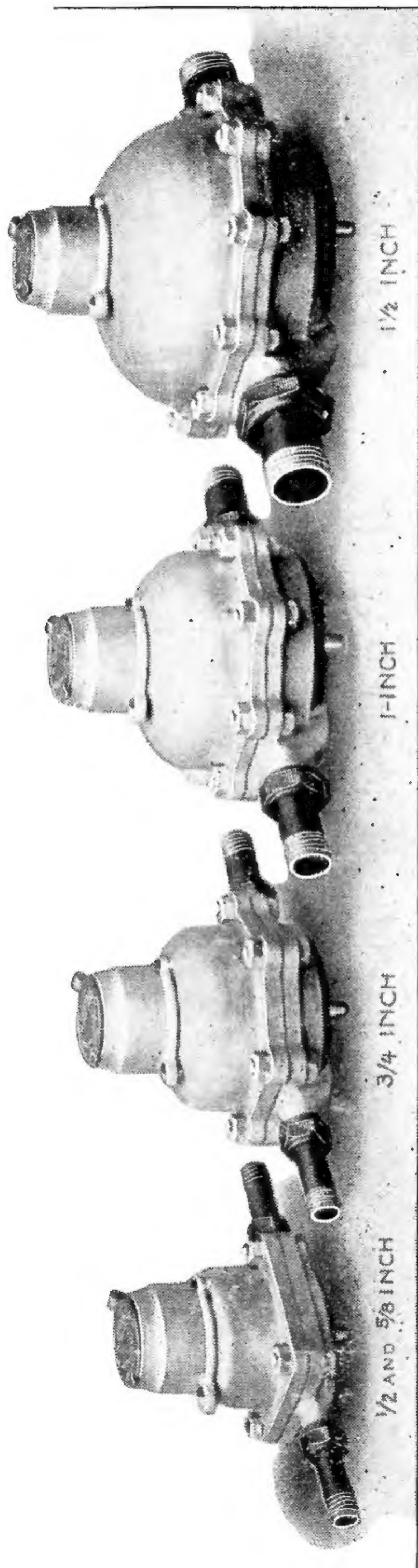
ANSWER.—Opposite 40 and under 7 we find 35158 gallons, which, without the decimal point, gives the answer.

QUESTION.—Reduce 9723 (ninety-seven hundred and twenty-three) cubic feet to gallons?

ANSWER.—Opposite 90 and under 7 we find 72561, dropping the decimal point.

Opposite 20 and under 3 we find 172, dropping the decimal.

Adding we have 72733 gallons, the correct answer.



## THE NEW AMERICAN WATER METERS.